AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-18. (canceled).

19. (new):

A method to reduce the driving voltage of a device comprising a smectic A liquid crystal composition and to enhance dynamic light scattering of the composition, said method comprising doping a smectic A liquid crystal composition with an ionic dopant comprising a sulfur or a phosphorous containing anion with a cation.

20. (new): A device comprising a smectic A liquid crystal composition, wherein the smectic A liquid crystal composition comprises one or more ionic dopants, wherein the ionic dopant comprises a sulfur or a phosphorus containing anion with a cation, wherein the ionic dopant reduces the driving voltage of the device and enhances dynamic light scattering of the composition.

21. (new): The device as claimed in claim 20, wherein the device is a display or a light shutter.

22. (new): A method of doping a smectic A liquid crystal composition, comprising adding an ionic dopant to a smectic A liquid crystal composition, wherein the ionic dopant

comprises a sulfur or a phosphorus containing anion with a cation, wherein the ionic dopant reduces the driving voltage of a device comprising the smectic A liquid crystal composition and enhances dynamic light scattering of the composition.

23. (new): A smectic A liquid crystal composition, comprising one or more ionic dopants, wherein the ionic dopant comprises a phosphorus containing anion with a cation, wherein the ionic dopant reduces the driving voltage of a device comprising the smectic A liquid crystal composition and enhances dynamic light scattering of the composition.

24. (new): The composition as claimed in claim 23, wherein the anion comprises X, and X is one of the following: POH^-, PO_2H^-, PO_3H^-, $(PO_3)^{2-}$, PO_4H^- or $(PO_4)^{2-}$.

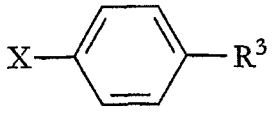
25. (new): The composition as claimed in claim 23, wherein the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano

group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19.

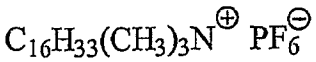
26. (new): The composition as claimed in claim 23, wherein the anion comprises:



wherein X is PO_3H^- or $(PO_3)^{2-}$, and R^3 is an alkyl or alkoxy chain.

27. (new): The composition as claimed in claim 23, wherein the anion is chiral.

28. (new): The composition as claimed in claim 23, wherein the dopant is:



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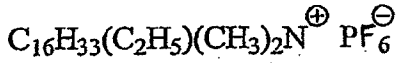

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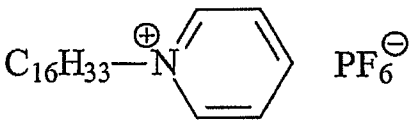

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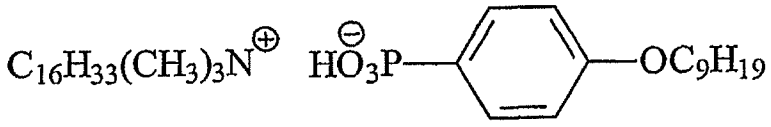

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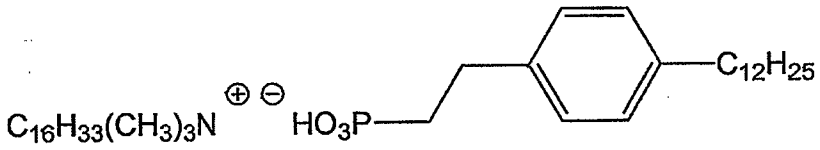

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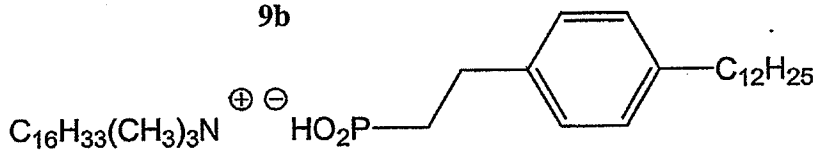

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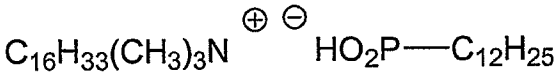

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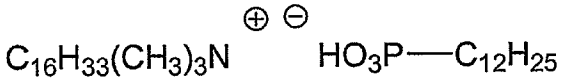

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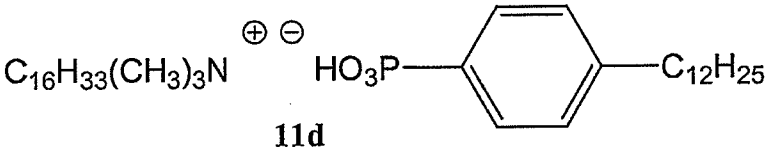

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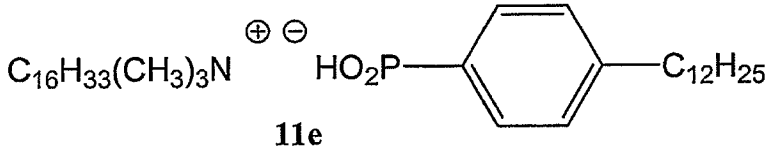

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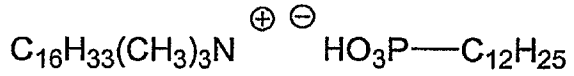

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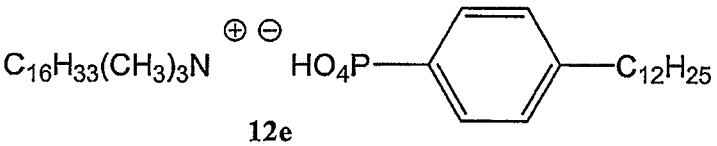

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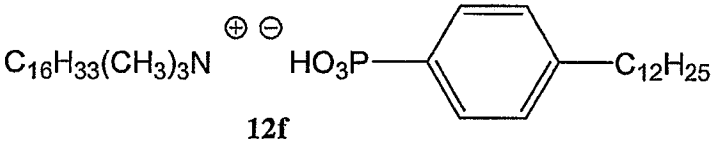

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29. (new): The composition as claimed in claim 23, wherein the cation is a quaternary ammonium cation.

30. (new): A smectic A liquid crystal composition, comprising one or more ionic dopants, wherein the ionic dopant comprises a sulfur containing anion with a cation, wherein the ionic dopant reduces the driving voltage of a device comprising the smectic A liquid crystal composition and enhances dynamic light scattering of the composition, wherein:

(a) the anion comprises X, and X is one of the following: S^-, SO_2^-, SO_4^- or $NHSO_3^-$; or

(b) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^- or $NHSO_3^-$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, R^1-(CO_2)-R^3, R^1-(CO_2)-R^2R^3, R^1-$(CH_2)_p$-R^3, or R^1-$(CH_2)_p$-R^2R^3; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(c) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^- or $NHSO_3^-$; m is 1; n is 0 to 19; and R is R^3, R^1R^3, R^1-(CO_2)-R^3, R^1-(CO_2)-R^2R^3, R^1-$(CH_2)_p$-R^3, or R^1-$(CH_2)_p$-R^2R^3; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(d) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^- or $NHSO_3^-$; m is 0 or 1; n is 0 to 19; and R is R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(e) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

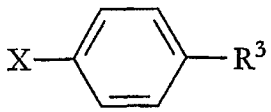
wherein X is S^-, SO_2^-, SO_3^- or $NHSO_3^-$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(f) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^- or $NHSO_3^-$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, R^1-(CO_2)-R^3, R^1-(CO_2)-R^2R^3, R^1-$(CH_2)_p$-R^3, or R^1-$(CH_2)_p$-R^2R^3; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(g) the anion comprises:



wherein X is SO_3^-, and R^3 is an alkoxy chain; or

(h) the anion is chiral; or

(i) the cation is based on an N,N'-dialkylimidazole, an N,N'-dialkylbenzimidazole, an N,N'-dialkyltriazole, an N-alkylquinuclidine or an N-alkylazanaphthalene; or

(j) the cation is according to formula II:

$Y\text{-}(CH_2)_q\text{-}R$ II

wherein Y is $NR^4R^5R^6$ wherein R^4, R^5 and R^6 is in every instance an alkyl group or an alkyl chain containing 0 to 5 carbon atoms, N-alkylimidazoles, N-alkylbenzimidazoles, N-alkyltriazoles, alkylquinuclidines or alkylazanaphthalenes; q is 0 to 19; and R is R^3, R^1R^3, R^1-(CO_2)-R^3, R^1-(CO_2)-R^2R^3, R^1-$(CH_2)_p$-R^3, or R^1-$(CH_2)_p$-R^2R^3; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

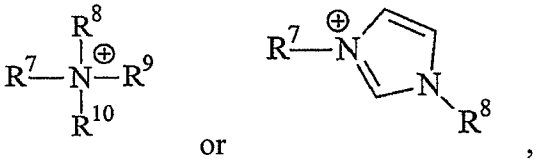
(k) the cation is according to formula II:

$Y\text{-}(CH_2)_q\text{-}R$ II

wherein Y is $NR^4R^5R^6$ wherein R^4, R^5 and R^6 is in every instance an alkyl group or an alkyl chain containing 0 to 5 carbon atoms, pyridines, N-alkylimidazoles, N-alkylbenzimidazoles, N-alkyltriazoles, alkylquinuclidines or alkylazanaphthalenes; q is 0 to 19; and R is R^3, R^1R^3, R^1-(CO_2)-R^3, R^1-(CO_2)-R^2R^3, R^1-$(CH_2)_p$-R^3, or R^1-$(CH_2)_p$-R^2R^3; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a

biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a cyano group, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(l) the cation is:

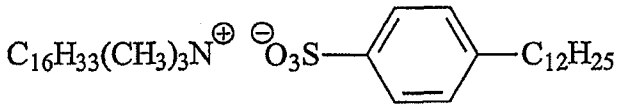


where R^7, R^8, R^9 and R^{10} are alkyl chains; or

(m) the cation is *n*-hexadecyltrimethylammonium (HTMA) or *n*-hexadecyldimethylethyl-ammonium (HDME); or

(n) the cation is chiral; or

(o) the dopant is:



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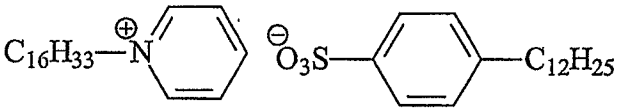

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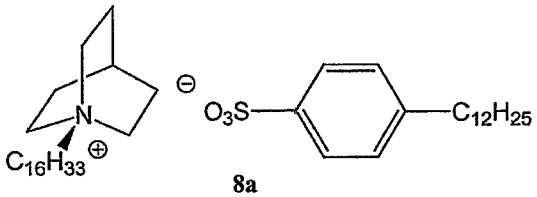

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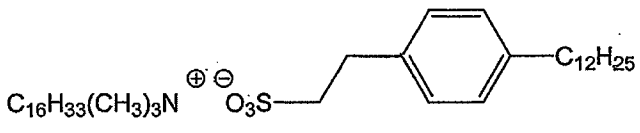

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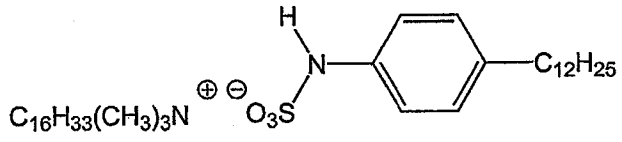

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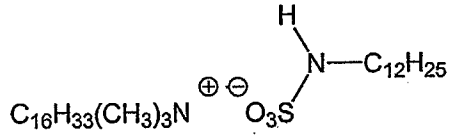

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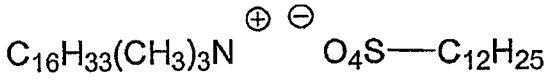

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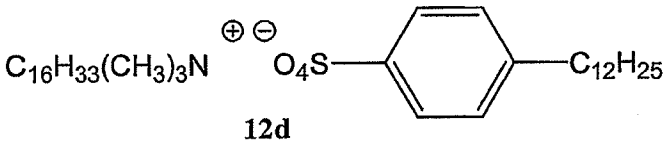

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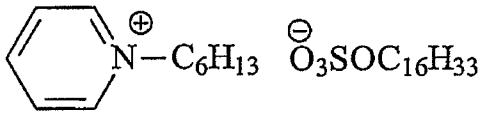


13a

31. **(new):** The composition as claimed in claim 30, wherein the cation is a quaternary ammonium cation.

32. (new): A method to reduce the driving voltage of a device comprising a smectic A liquid crystal composition and to enhance dynamic light scattering of the composition, said method comprising doping a smectic A liquid crystal composition with an ionic dopant comprising a quaternary ammonium cation with an anion.

33. (new): A device comprising a smectic A liquid crystal composition, wherein the smectic A liquid crystal composition comprises one or more ionic dopants, wherein the ionic dopant comprises a quaternary ammonium cation with an anion, wherein the ionic dopant reduces the driving voltage of the device and enhances dynamic light scattering of the composition.

34. (new): The device as claimed in claim 33, wherein the device is a display or a light shutter.

35. (new): A method of doping a smectic A liquid crystal composition, comprising adding an ionic dopant to a smectic A liquid crystal composition, wherein the ionic dopant comprises a quaternary ammonium cation with an anion, wherein the ionic dopant reduces the driving voltage of a device comprising the smectic A liquid crystal composition and enhances dynamic light scattering of the composition.

36. (new): A smectic A liquid crystal composition, comprising one or more ionic dopants, wherein the ionic dopant comprises a quaternary ammonium cation with an anion, wherein the ionic dopant reduces the driving voltage of a device comprising the smectic A liquid crystal composition and enhances dynamic light scattering of the composition, wherein:

(a) the anion is a phosphorus containing anion; or

(b) the anion comprises X, and X is one of the following: S^-, SO_2^-, SO_4^-, $NHSO_3$, POH^-, PO_2H^-, PO_3H^-, $(PO_3)^{2-}$, PO_4H^- or $(PO_4)^{2-}$; or

(c) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, $NHSO_3^-$, POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(d) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^-, $NHSO_3^-$, POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an

aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(e) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^-, $NHSO_3^-$, POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 0 or 1; n is 0 to 19; and R is R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(f) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^-, $NHSO_3^-$, POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted

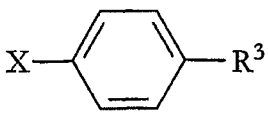
biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(g) the anion is according to formula I:

$X\text{-}O_m(CH_2)_n\text{-}R$ I

wherein X is S^-, SO_2^-, SO_3^-, $NHSO_3^-$, POH^-, PO_2H^-, PO_3H^- or $(PO_3)^{2-}$; m is 0 or 1; n is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(h) the anion comprises:



wherein X is SO_3^-, PO_3H^- or $(PO_3)^{2-}$, and R^3 is an alkoxy chain; or

(i) the anion is chiral; or

(j) the cation is based on an N,N'-dialkylimidazole, an N,N'-dialkylbenzimidazole, an N,N'-dialkyltriazole, an N-alkylquinuclidine or an N-alkylazanaphthalene; or

(k) the cation is according to formula II:

$Y\text{-}(CH_2)_q\text{-}R$ II

wherein Y is $NR^4R^5R^6$ wherein R^4, R^5 and R^6 is in every instance an alkyl group or an alkyl chain containing 0 to 5 carbon atoms, N-alkylimidazoles, N-alkylbenzimidazoles, N-alkyltriazoles, alkylquinuclidines or alkylazanaphthalenes; q is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a hydrogen, a cyano group, an alkyl chain, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

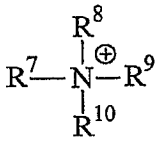
(l) the cation is according to formula II:

$Y\text{-}(CH_2)_q\text{-}R$ II

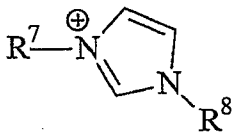
wherein Y is $NR^4R^5R^6$ wherein R^4, R^5 and R^6 is in every instance an alkyl group or an alkyl chain containing 0 to 5 carbon atoms, pyridines, N-alkylimidazoles, N-alkylbenzimidazoles, N-alkyltriazoles, alkylquinuclidines or alkylazanaphthalenes; q is 0 to 19; and R is R^3, R^1R^3, $R^1\text{-}(CO_2)\text{-}R^3$, $R^1\text{-}(CO_2)\text{-}R^2R^3$, $R^1\text{-}(CH_2)_p\text{-}R^3$, or $R^1\text{-}(CH_2)_p\text{-}R^2R^3$; wherein R^1 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a

non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^2 is a phenyl, a substituted phenyl, a biphenyl, a substituted biphenyl, a terphenyl, a substituted terphenyl, an aromatic ring, a non-aromatic ring, a cyclohexyl, a cyclopentyl, a diazine, a bidiazine, a terdiazine, a phenyldiazine, a biphenyldiazine, a naphthalene or an azanaphthalene; R^3 is a cyano group, an alkyl substituted cyclohexyl, an alkenyl chain, or an alkyl chain wherein one or more non-adjacent CH_2-groups are replaced by an oxygen atom; and p is 0 to 19; or

(m) the cation is:



or



,

where R^7, R^8, R^9 and R^{10} are alkyl chains; or

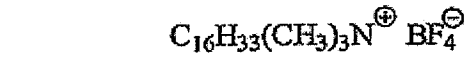
(n) the cation is *n*-hexadecyltrimethylammonium (HTMA) or *n*-hexadecyldimethylethyl-ammonium (HDME); or

(o) the cation is chiral; or

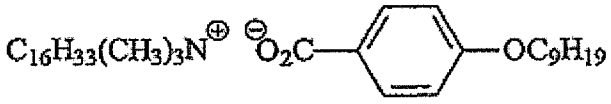
(p) the dopant is:

$C_{16}H_{33}(CH_3)_3N^{\oplus}\ Br^{\ominus}$ **1a**

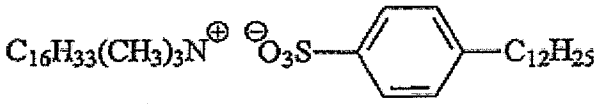
$C_{16}H_{33}(CH_3)_3N^{\oplus}\ PF_6^{\ominus}$ **1b**



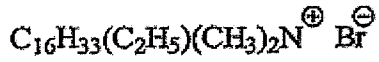
1c



1d



1e

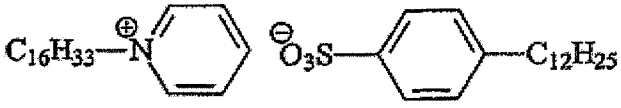


2a

2b

3a

3b



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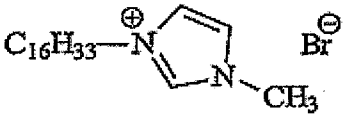
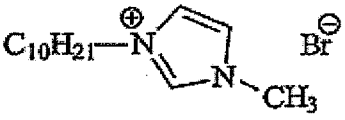
4a



5a



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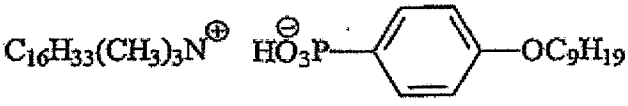
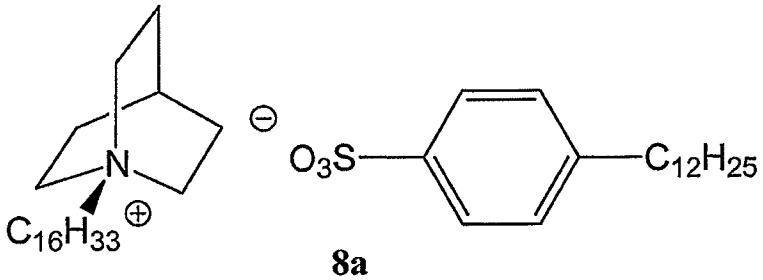
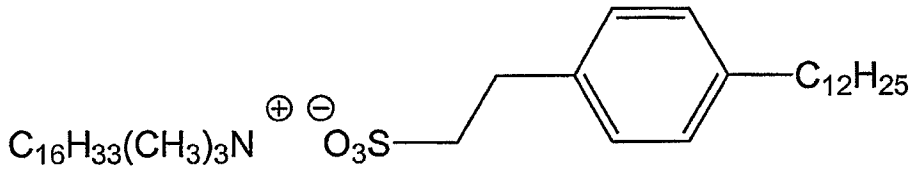


7a



8a



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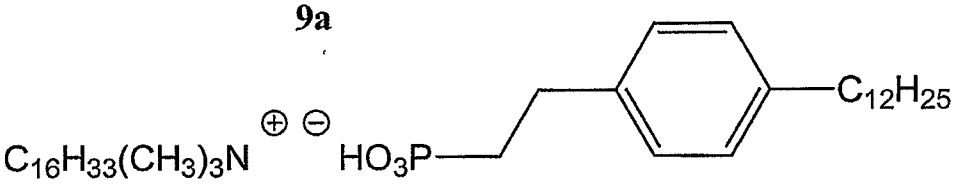

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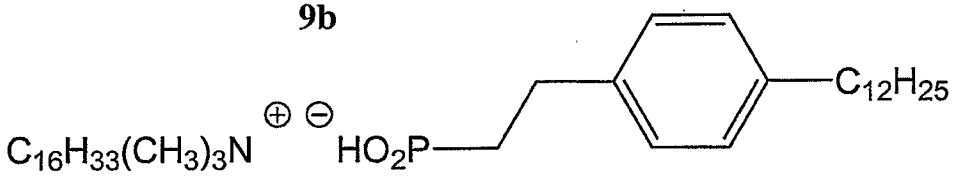

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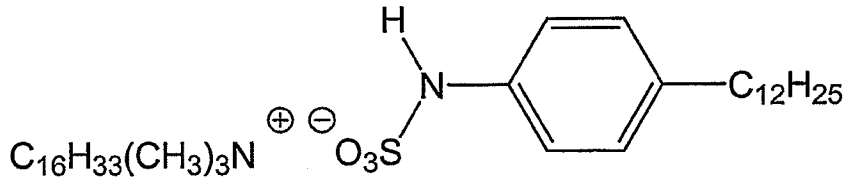

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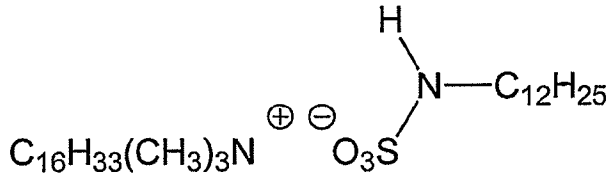
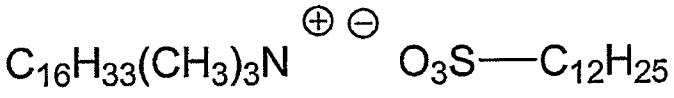
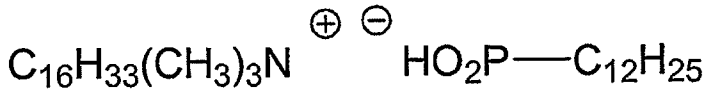


10b

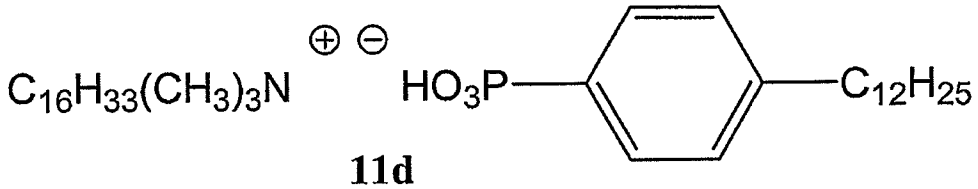


11a



11b

11c



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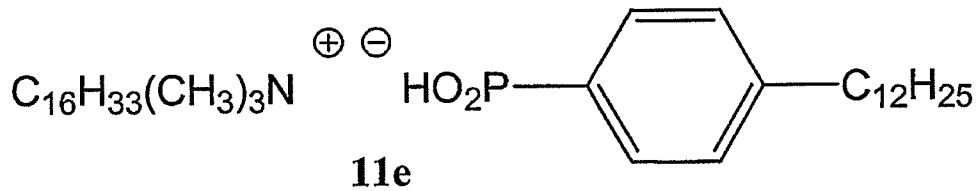
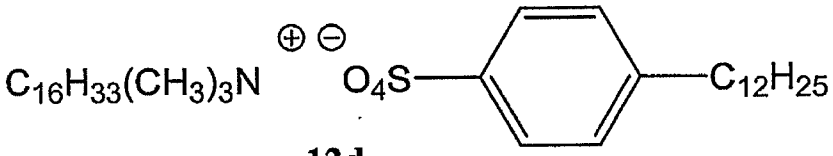


11e

12a

12b

12c



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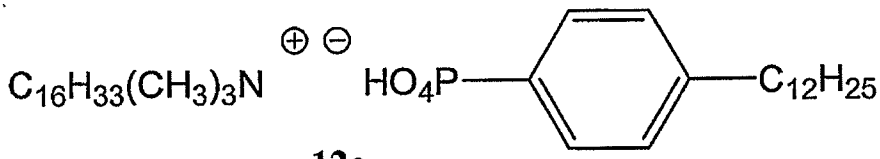

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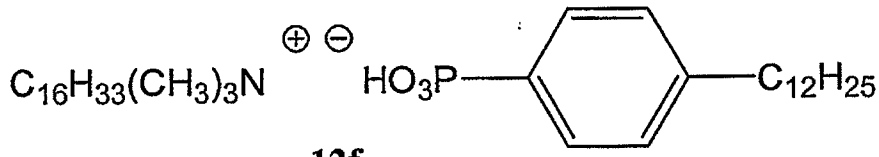

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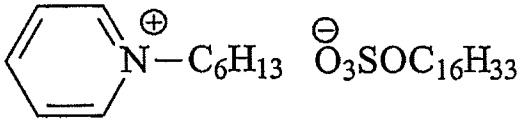

13a

37. (new): The composition as claimed in claim 36, wherein the anion is a sulfur or a phosphorus containing anion.